# Welfare Beyond Markets: An Augmented Cost Of Living Approach for India

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# 1 Abstract

This paper examines how India's Consumer Price Index may overstate the cost of living when large-scale, in-kind public provisions are unaccounted for. Building on Nordhaus's augmented cost of living index (ACOLI), we construct a similar framework for India by adjusting conventional aggregates based on two price-raising but welfare-providing components: government in-kind transfers captured in Government Final Consumption Expenditure, and indirect business taxes scaled to household consumption. Using official data from MoSPI and the Union budget for fiscal years 2022-23 and 2023-24, and treating Private Final Consumption Expenditure and Net National Income as baseline measures of output, we estimate the divergence between market-based inflation and an ACOLI that reflects non-market consumption. Our illustrative results show an upward bias in the CPI of roughly 0.4-0.6 percentage points. That is, the CPI might show the cost of living to be growing at a faster rate than in reality. We also find that measured output exceeds its stripped equivalent by about 9-13%, signalling a sizable share of welfare-financed consumption in national accounts. The findings suggest that an augmented cost-of-living index would better capture welfare changes and improve policy assessment. Our findings also invite further work on improved valuation methods and clearer identification of welfare effects in the Indian context.

# 2 Introduction

The Ministry of Statistics and Programme Implementation's (MoSPI's) recent discussion paper on the treatment of the Public Distribution System (PDS) provision of free food grains in India's Consumer Price Index (CPI) has opened an important debate concerning how India measures inflation, assesses cost of living, and informs policy action through the CPI's multiple roles. The discussion highlights a case, distinct to the Indian context, where a major consumption item now has zero out-of-pocket expenditure for a large share of households. This depicts a form of welfare-enhancing consumption which the CPI is unable to capture.

The Indian CPI tracks retail inflation by measuring changes in price paid by consumers for a fixed, representative basket of goods and services compiled based on household spending surveys. The basket includes items across major categories such as food, housing, education, healthcare, and transport. In India a separate CPI is constructed for rural and urban populations (alongside a combined index), along with State and Union Territory level indices. The combined CPI acts as the Reserve Bank of India's key inflation indicator, and tool to aid shaping monetary policy. In addition, the CPI serves as the deflator for real GDP, guides the design of welfare programs, and provides a basis for wage and contract indexation (MoSPI, 2025). We envision a market-based price index for these roles, but the CPI fails to account for factors such as welfare gains that do not appear in household expenditures. Therefore, it remains an insufficient measure for assessing welfare and distributional outcomes.

In order to capture the impact of welfare-enhancing systems, we aim to look at other measures of cost of living that go beyond traditional measures such as the CPI to account for non-market goods and services. These would include publicly provided private goods and services, benefits arising from social regulation, and employer-provided benefits (Nordhaus, 1992). These forms of augmented consumption

raise living standards but do not appear as market purchases, leading the CPI to overstate the cost of living and understate real income or consumption. Non-market goods and services are often financed through mechanisms that raise market prices such as taxes or regulatory mandates, without reducing household welfare. This is a distortion that the CPI cannot correct.

One such example of a cost of living measure beyond a market-based index is the European Union's estimate of the Actual Individual Consumption (AIC). It encompasses all goods and services actually consumed by households, including direct market purchases as well as services provided by the government and non-profit organisations for individual consumption. Through this, AIC is able to compare living standards across countries in Europe that provide different levels of publicly funded services such as health-care, education, or housing (Eurostat, 2025). This serves as a practical example of a cost of living measure that accounts for welfare benefits outside of market-based channels, setting a precedent for a similar replication in practice for other economies.

The Augmented Cost-of-Living Index (ACOLI), as conceptualised by William Nordhaus (1999), is an adjusted measure of living standards that accounts for both market prices and non-market factors such as government-provided goods to estimate the level of expenditure required to maintain a representative level of household welfare across different periods. This becomes especially relevant within India, where a substantial share of household consumption is shaped through government schemes in the form of in-kind transfers. This paper, following Nordhaus, incorporates non-market public provision to construct an ACOLI adapted to the Indian context that appropriately accounts for these improvements in cost of living.

# 3 Literature Review: Limitations of CPI

India's policy landscape is distinctly characterised by an extensive system of publicly provided private goods and in-kind transfers. As per the Ministry of Labour and Employment, 65% of India's population (920 million people) is covered by at least one social protection benefit (either cash or in-kind), with 48.8% receiving cash benefits across 34 major Central schemes (Press Information Bureau, 2025). A large share of consumption is not purchased at market prices, implying that official measures of consumption such as Private Final Consumption Expenditure (PFCE) may understate true levels of household welfare. Thus, the difference between a market-based index such as the CPI and an ACOLI would be larger in India than in other countries with limited in-kind provisions.

The breadth of central, and centrally sponsored schemes - including Samagra Shiksha, the National Health Mission, Jal Jeevan Mission, Rashtriya Krishi Vikas Yojana, and Pradhan Mantri Gram Sadak Yojana (Ministry of Finance, 2024) - illustrate the extent to which public provision shapes well-being in India (See Table 5 in the Appendix for more details). These schemes raise the welfare of households and influence their purchasing power, affect local price formation and access to important services, and yet remain unaccounted for in the Indian CPI. India operates an extensive system of non-market consumption, with individual welfare schemes reaching a substantial share of households; PM-GKAY alone covers approximately 57% of the population, underscoring the scale of welfare-enhancing consumption outside

market transactions. [1].

Taking an example of non-market consumption, in the current CPI series, PDS and non-PDS sources for the same grain are treated as distinct items with separate weights within the 'Major Cereals and Products' section. When these grains are distributed free of cost, weights originally allocated to these items are redistributed proportionally across the other items within the 'Major Cereals and Products' section (MoSPI, 2025). Other proposed methods prescribed in the Consumer Price Index Manual: Concepts and Methods (Graf, 2020) suggest using a zero price and adjusting the weight during the next update, or re-distributing the weight broadly over all the items in the basket. All these methods prevent the CPI from reflecting the welfare benefits of these schemes, because it treats the free grains financed by taxes as price additives, without trying to place a monetary value on the welfare the grains also provide. These other methods also fail to reflect the true deflationary pressure they create.

The new methodology proposed by MoSPI, with the aim to better represent this shift from a positive value to 0 for a huge consumption item, calculates a weighted average PDS price for the respective state, where the weights are based on quantity share from the Household Consumption Expenditure Survey (HCES). This creates one combined index per grain, rather than separate PDS and non-PDS indices (MoSPI, 2025). As households shift from market purchases to PDS or vice versa, weights update in the next basket revision. This allows the inflation effect to be captured immediately as the weights adjust periodically.

Despite the new methodology proposed by MoSPI improving the representation of price movements and deflationary impacts when the value of a good changes from positive to zero or vice-versa, the CPI remains unable to capture the true welfare impact of these schemes.

# 4 Empirical Framework of the ACOLI

Nordhaus, (1999) argues that since a significant share of consumption is through non-market channels such as public provision, employer benefits, or regulatory mandates, these goods are often financed in ways that raise market prices without affecting market incomes. If this is the case, deflating nominal incomes using the CPI may lead to an understatement of real income growth.

Instead, Nordhaus (1999), proposes a measure of cost of living (ACOLI) that would account for both market and non-market goods and services at the same level of well-being at different time periods, or sets of prices. His empirical application of this measure shows that the CPI rose about 19% faster than the ACOLI for the United States over 1960-1997, implying a downward bias in real income growth when non-market consumption is ignored.

Nordhaus accounts for the price effects of welfare-enhancing components to record the true cost of living by comparing the yearly growth rate of ACOLI with the yearly growth rate of CPI. Divergence between the two indicates the extent to which observed price increases reflect government provisions instead of

[1] We calculated the share of 57% based on beneficiary figures reported for PM-GKAY (approximately 810 million) (Press Information Bureau, 2024) and total population estimates of about for India (approximately 1,480 million)

a decline in purchasing power, and whether living standards are improving faster than that reflected by the CPI alone. In this paper, we adapt this approach to India by examining the ACOLI and the CPI to illustrate the rate of change in living standards between two years.

Our calculations hold under three crucial assumptions. First, following Nordhaus, we assume a one-to-one relation between one rupee expenditure to one rupee of welfare for consumers. Second, using Private Final Consumption Expenditure (PFCE) data implicitly limits our analysis to the formal economy. This is important to note as nearly 90% of India's workforce is informally employed. (International Labour Organization, 2024). Third, we assume a full pass-through rate of indirect taxes to consumer prices.

# 5 Methodology

This section describes the empirical construction of an *Augmented Cost-of-Living Index* (ACOLI) for India, following the conceptual framework of Nordhaus (1999). The ACOLI extends conventional price indexes (e.g., CPI) by accounting for "augmented consumption": goods and services provided by employers and the government (subsidies, in-kind transfers, public goods) whose costs are embedded in market prices but which may not reduce household welfare.

## 5.1 Notation and definitions

- $PA_t$ : Price additions in year $t$ (sum of components that raise market prices but represent consumption financed outside household purchases).
- $M_t^{\text{stripped}}$ : "Stripped" consumption in year $t$.
- $R_t$ : Ratio of conventional to stripped consumption
- $\text{CPI}_t$ : Consumer Price Index level in year $t$ (index number).
- $T$ : number of years between the start and end year in a subperiod.

## 5.2 ACOLI Construction

Nordhaus defines ACOLI as the ratio of expenditures necessary to attain W* with new prices and public goods $(p_1, G_1)$ relative to expenditures necessary to attain W* at original levels $(p_0, G_0)$. Our ACOLI recognizes the price raising elements that lead to levels of public goods, or private goods not purchased by consumers, may raise conventionally measured price indexes such as the CPI while leaving the ACOLI unchanged (Nordhaus, 1999). The narrow ACOLI corrects the measured price index to reflect the change in the share of the public good in total consumption spending. The resulting rate of change reflects movements in the cost of living stripped of welfare-enhancing public provisions.

We wish to compare the expenditures needed to attain a certain level of economic welfare with and without price raising measures. These higher prices are caused by nonmarket transactions that provide health services,environmental protection, or future pensions (Nordhaus, 1999). General ACOLI formula:

$$P(p_1, p_0; G_1, G_0, W^*) = \frac{E(p_1, G_1, W^*)}{E(p_0, G_0, W^*)}.$$

- $E(p_t, G_t, W^*)$ is the expenditure function.
- $p_t$ = prices of private goods at time period t.
- $G_t$ = quantities of public goods at time period t.
- $W^*$ = reference level of social welfare.
- $P(p_1, p_0; G_1, G_0, W^*)$ = ACOLI

In practice, Nordhaus implements a narrow ACOLI, which adjusts conventional consumption data by subtracting the cost-raising items whose benefits compensate for their associated increase in prices. This yields a "stripped consumption" measure that isolates true private consumption, net of mandated or publicly financed components that do not reduce welfare ().

$$\Delta log(q1) = \Delta log(p1) - \Delta log(1 + q2C2/qlC1)$$
$$= \Delta log(pl) - \Delta(q2C2/q1C1)$$

Here, $log(p1)$ is CPI and $(q2C2/q1C1)$ is the ratio of augmented to stripped measure of output, this can also be written as :

$$\Delta \ln(\text{ACOLI}) = \Delta \ln(\text{CPI}) - \Delta \ln(R_t)$$

## 5.3 Calculations

We derive these formulae from Nordhaus (1992)'s illustrative example for the US. These calculations are our breakdown of the concepts, and do not reflect what Nordhaus may have followed. Here, $R_t$ is the ratio of Conventional to Stripped Measure of Output

$$\mathrm{R}_t = \frac{M_t^{\text{stripped}}}{M_t^{\text{conv}}}$$

Where $M_t^{\text{conv}}$ denotes measures of output PFCE, GFCE . Time period t is for FY 2022-23 and FY 2023-24 and $M_t^{\text{stripped}}$ denotes measures of output without government welfare contributions, calculate the following way:

$$M_t^{\text{stripped}} = M_t^{\text{conv}} - PA_t$$

We obtain the stripped measure of output by subtracting conventional measure of output by price additions

(PA), calculated as follows:

$$\text{GFCE}_{hh,t} = \sum_{s \in \mathcal{S}} \text{Scheme}_{s,t}, \quad \mathcal{S} = \{\text{NHM, PM POSHAN, Ayushman Bharat, others in Appendix Table A4}\}.$$

$$\text{Indirect Taxes} = \text{GSTRev} + \text{ExciseDuties} + \text{CustomsDuties} + \text{Cesses}$$

The household-paid component is then:

$$\text{Indirect Taxes}_{hh} = \text{Indirect Taxes} \times \left( \frac{\text{Measure Of Output}}{\text{GDP}} \right)$$

We multiply by PFCE/GDP because ACOLI requires only the share of taxes embedded in household consumer prices. PFCE represents household final consumption, so scaling by this ratio isolates the portion of total output consumed by households. Thus, writing $PA_t$ as a sum of components:

$$PA_t = \text{I}ndirectTaxes_{hh} + GFCE_{hh},$$

This gives us the level of the Ratio of Conventional to Stripped Measure of Output. To observe how it changes over the years, we take logs and subtract the ratio of Conventional to Stripped Measure of Output for two consecutive years because log differences approximate percentage changes. We divide by T to obtain yearly bias. We multiply 10,000 because the percentage changes are very small so we measure them in basis points.

$$\text{Bias in Conventional Price Indices } [\Delta \ln(R_t)] = 10{,}000 \times \frac{\ln\left(\frac{R_1}{R_0}\right)}{T}$$

- $T$ = number of years between $R_0$ and $R_1$.
- $R_0$ = Starting year
- $R_1$ = Ending year

And, change in CPI is calculated using the following:

$$\Delta \ln(\text{CPI}) = \ln(\text{CPI}_1) - \ln(\text{CPI}_0)$$

# 6 Replicating Nordhaus' Framework in the Indian Context

For our Indian application, we look at two categories of items that raise consumption through non-market channels, Government Final Consumption Expenditure (GFCE) and Indirect taxes. Within Government Final Consumption Expenditure (GFCE), Central Schemes (CS) and Centrally Sponsored Schemes (CSS)

include welfare-enhancing in-kind transfers (Press Information Bureau, 2025).

## 6.1 Measures of Output

Our main ACOLI functions are National Income and Private Final Consumption Expenditure (PFCE). We use PFCE because mandatory price-raising items such as indirect taxes, social insurance contributions, and regulations financing welfare schemes directly affect household consumption prices. Because PFCE is defined as the total spending by resident households on final goods and services for their own use, (MoSPI, 2007) this can distort PFCE. Our approach corrects for these distortions to better capture underlying welfare effects.

National Income removes depreciation and therefore reflects the income that actually accrues to residents in the form of wages, profits, rental income, and interest, rather than the value of production within domestic borders as measured by GDP (United Nations, 2009). This depreciation represents the cost of maintaining the existing capital stock and does not contribute to current-period welfare.

## 6.2 Price Additions

Nordhaus (1992) adjusts for employer social contributions, fringe benefits, social regulation costs and indirect business taxes as price-raising components in his ACOLI. We use in-kind transfers and taxes given the Indian context and data constraints.

In-kind transfers are directly given to the households instead of cash. CPI for India overestimates the cost of living because the cost of acquiring these goods are close to 0 for beneficiary households, while the CPI includes the full market prices as recorded in its calculations (World Bank, 2018) (Ministry of Statistics & Programme Implementation, 2020). Indian CPI records the cost of out-of-pocket expenditure by the households, but fails to account for subsidized goods and services provided by the government (Press Information Bureau, 2014) (Kapur, Muralidharan, & Prakash, 2021). These benefits constitute consumption for a large share of the Indian population. Taxes, employer social contributions, fringe benefits and regulatory costs are other factors that cause CPI to overestimate the cost of living (Nordhaus, 1992). OECD, (2014) suggests that regulatory burdens increase firm's compliance costs, which are often passed forward to consumers through higher prices, however, the efficiency of pass through depends on pricing strategies and market power. Due to data collection issues, we omit employer social contributions, fringe benefits and regulatory costs from our methodology.

Indirect business taxes and cesses are levied on firms but are passed on to consumers through higher market prices. A key example in India is the Goods and Services tax (GST) applied to goods and services across intermediate inputs, imports, capital goods, and final consumption. To approximate the portion of indirect taxes attributable to household consumption, we scale total indirect tax revenue by PFCE/GDP. The indirect taxes include GST Revenue (CGST, IGST settlement, GST Compensation Cess), Union Excise Duties (primarily applicable on petrol and diesel), Customs Duties (Partly on consumption goods, affecting consumer prices of imports), consumption-linked cesses and surcharges (such as the Road and Infrastructure Cess and other product-specific cesses embedded in prices).

# 7 Illustrative estimates of India's ACOLI Adjustment

Using the methodology described above, we calculate the bias in the CPI, and the Augmented Cost-of-Living Index (ACOLI) for the years FY2022-23 (t=0) and FY2023-24 (t=1).

We interpret M(conv) to be either Net National Income (NNI) or Private Final Consumption Expenditure, because Nordhaus uses the terms 'consumption' and income interchangeably when discussing the conventional measure he is working with in his calculations. From this, we subtract the 'Price Additions,' which broadly fall into two categories - direct transfer of goods and services provided by the government, and indirect taxes paid by businesses. We aggregate the actual expenditure under the government schemes. The full list of which can be found in table 5 of the appendix.

All data used for the calculation is taken either from reports by the Ministry of Statistics and Programme Implementation (MoSPI), or from the union budget's expenditure and receipts reports. One huge constraint was the lack of data on actual expenditure on the PM-GKAY scheme, for both years of study. Further, data for certain schemes, such as the National Health Mission and the Samagra Shiksha Abhiyan, was included under a broad umbrella of health and education expenditure. We were not able to find isolated data points for the free provision/direct transfer of goods and services under the above mentioned schemes, so the data we were left with could create potential distortions.

The results in Table 1 show that conventional CPI inflation marginally overstates the true rise in living costs. Between FY 2022-23 and 2023-24, the implied upward bias is around 0.4-0.6 percentage points, which means that stripped consumption grew faster than measured consumption. This indicates that the conventional CPI slightly overestimates inflation, suggesting that real household consumption and welfare improved more than what is implied by official measures. The ratio of conventional to stripped output is 1.09 for net national income and 1.13 for private final consumption expenditure. Thus, our calculations suggest measured output in India is 9-13% larger than its stripped equivalent (taking 1 as the 'base value' of stripped consumption). Realistically, this share represents the portion of national income and consumption that is not directly purchased by households in the market, and takes the form of government-provided or tax-financed goods and services. These include free food, education, health care and other welfare programs. Together, they raise the nominal value of output and expenditure captured in GDP and CPI, but do not correspond to higher out-of-pocket spending by households. A household receiving free food grains or education experiences an improvement in welfare, but that benefit is financed through government taxation and transfers rather than higher private consumption expenditure, thus inflating GDP and CPI. Our results are consistent with official data showing that government social services spending, comprising welfare schemes and publicly provided goods, accounted for around 7.8% of GDP in FY 2023-24 (Government of India, Ministry of Finance, 2024) thus, forming a substantial part of household welfare outside the market.

Adjusting for these effects, our calculated ACOLI indicates that the true cost of living in India rose by 4.7-4.8% between FY 2022-23 and 2023-24, compared with 5.2% CPI inflation. This upward bias of roughly 0.5 percentage points in the CPI, highlights that a significant share of India's measured output represents public welfare transfers rather than market-based consumption. These estimates evidence the

need for an augmented cost of living index in India.

Table 1: Data Underlying Calculation of ACOLI (India, FY 2022–23 to 2023–24)

| **Output measure** | **2022–23** | **2023–24** |
|---|---|---|
| *Ratio of conventional to stripped measure of output* | | |
| Net National Income (NNI) | 1.0896 | 1.0835 |
| Private Final Consumption Expenditure (PFCE) | 1.1380 | 1.1336 |
| *Bias in conventional price indexes (basis points per year)* | | |
| Net National Income (NNI) | 56.6 | |
| Private Final Consumption Expenditure (PFCE) | 38.6 | |
| *Underlying data (rupees crore, current prices)* | | |
| Gross Domestic Product (GDP) | 16164913 | 17650591 |
| Net National Income (NNI) | 13851412 | 15175671 |
| Private Final Consumption Expenditure (PFCE) | 9384943 | 9906774 |
| *Corrections to obtain augmented social cost of living* | | |
| Indirect taxes | 887302 | 912736 |
| Free government goods & services | 250337 | 255173 |
| **Total price additions** | **1137639** | **1167909** |
| NNI less price additions | 12713773 | 14007762 |
| PFCE less price additions | 8247304 | 8738865 |
| *Bias-corrected inflation (*$\Delta \ln$ *ACOLI)* | | |
| Using NNI | 465.4 bp (4.65%) | |
| Using PFCE | 483.4 bp (4.83%) | |

# 8 Limitations and Scope for Further Research

Certain limitations of the ACOLI, acknowledged by Nordhaus himself, include (a) the lack of strong measures of the benefits provided by many government programs that involve direct cash or in-kind transfers, and (b) the uncertainty of the linkage between public expenditure and the increment to consumer welfare, along with (c) the simplifications assumed for ease of discussion, highlighted in the methodology section. In addition to these limitations, we foresee certain factors that may limit the adaptability of such a concept into the distinct Indian context. Firstly, the scale of informal employment, uneven access to government schemes, and the lack of a clear method to standardize benefits across households makes it difficult to determine the extent to which an intervention benefits a group.

Accounting for and quantifying "employee benefits" or their equivalents is arduous due to inadequate data. Similar difficulties arise when valuing non-market goods such as public meals, roads, or environmental quality, which rely on indirect valuation methods based on government expenditure or imputed market prices and involve substantial judgement and uncertainty, along with the risk of bias and manipulation.

Welfare gains tend to be cumulative; receiving one benefit often enables or amplifies another. For example, continued access to LPG under the Ujjwala scheme improves health and frees time for labour, but these gains differ substantially for households only able to access LPG infrequently, thus receiving only a fraction of the benefit. Indian LPG schemes in particular are vulnerable to exploitation by "ghost beneficiaries" or households that do not qualify for the scheme (Barnwal, 2018). This adds to our discussion in the methodology section where we acknowledge that we cannot be confident in the assumption of a one-to-one relationship between incremental benefit to consumption and per rupee mandated cost. Further, because welfare schemes and regulations often change with shifts in government priorities, it is tough to ensure a cost-of-living index that remains consistent and comparable over time.

Lastly, another nuance of the Indian context is that a large share of the beneficiaries of these schemes do not pay the relevant taxes, either since they fall outside the net of the direct taxes, or because their consumption patterns do not involve the taxed goods or services. This breaks Nordhaus' assumption that the same consumer bears the cost of the tax while receiving the corresponding benefit. These limitations point to several avenues for further work. More reliable valuation methods for government-provided and regulated goods combining administrative expenditure data, revealed-preference evidence, and household demand pattern would aid a well-rounded valuation. Methods to distinguish genuine welfare improvements from policy-driven fluctuations would be essential in achieving a consistent ACOLI. These suggestive research directions would aid in building a more robust framework of measuring cost of living in the India-specific context where non-market consumption plays a significant role.

# 9 Conclusion

This paper examined the limits of India's CPI as a measure of cost of living in an economy where a large share of consumption occurs outside market channels. By adapting Nordhaus's ACOLI framework to the Indian context, we show that extensive in-kind public provision and tax-financed transfers create a systematic gap between measured inflation and changes in household welfare. Our illustrative estimates for FY 2022-23 to FY 2023-24 indicate that conventional CPI inflation slightly overstates the rise in living costs, and that a substantial portion of measured income and consumption reflects government-provided goods and services rather than out-of-pocket household expenditure.

Our findings do not challenge the CPI's role as a market price index for monetary policy or indexation. Rather, they highlight its limitations as a welfare indicator, particularly in a policy environment shaped by large-scale social provisioning. Recognising this distinction is crucial for interpreting inflation, real income growth, and distributional outcomes in India. While our analysis was constrained by data limitations and simplifying assumptions, it underscores the need for developing complementary and well-rounded cost of living measures that explicitly account for non-market consumption.

# 10 Appendix

Table 2: ACOLI Calculations Using NNI- and PFCE-based Measures

| | **NNI-based** | | **PFCE-based** | |
|---|---|---|---|---|
| **Item** | 2022–23 | 2023–24 | 2022–23 | 2023–24 |
| **A. Stripped Consumption Levels** | | | | |
| Stripped consumption measure | 12,713,773.40 | 14,007,761.92 | 8,247,304.40 | 8,738,864.92 |
| **B. Ratio of Market to Total Consumption ($R_t$)** | | | | |
| $PA_t$ | 1,137,638.60 | 1,167,909.08 | 1,137,638.60 | 1,167,909.08 |
| $R_t$ | 0.9178 | 0.9230 | 0.8787 | 0.8821 |
| **C. Log Changes (Basis Points)** | | | | |
| Change in ln $R_t$ (bp) | 56.6 | | 38.6 | |
| Change in ln CPI (bp) | 522 | | 522 | |
| **D. Implied Change in ACOLI** | | | | |
| Change in ln(ACOLI) (bp) | 465.4 | | 483.4 | |
| Change in ln(ACOLI) (%) | 4.65% | | 4.83% | |

Table 3: Indirect Taxes Adjustment Used in ACOLI Construction

| **Item** | **2022–23** | **2023–24** |
|---|---|---|
| **Indirect Taxes: Final Adjustment** | | |
| PFCE / GDP | 0.5805 | 0.5612 |
| Indirect taxes × (PFCE / GDP) | 887,301.81 | 912,735.88 |

Table 4: Selected Macroeconomic Aggregates Used in the Analysis

| **Item** | **Value Used** |
|---|---|
| PFCE, 2022–23 | 9384943 |
| PFCE, 2023–24 | 9906774 |
| National Income, 2022–23 | 13851412 |
| National Income, 2023–24 | 15175671 |
| GFCE (HH), 2022–23 | 250336.79 |
| GFCE (HH), 2023–24 | 255173.20 |
| CPI, 2022–23 | 174.74 |
| CPI, 2023–24 | 184.10 |
| GDP, 2022–23 | 16164913 |
| GDP, 2023–24 | 17650591 |

Table 5: Centrally Sponsored and Central Schemes: Free Goods, Services, and Transfers

| **Category** | **Scheme Name** | **Free Good / Service / Benefit Provided** | **2023–24 (Rs. crore) [R1]** | **2022–23 (Rs. crore) [R0]** |
|---|---|---|---|---|
| Health | Ayushman Bharat – PM-JAY | Provides free health cover of up to Rs. 5 lakh per family per year for secondary and tertiary care hospitalization. | 6,670.47 | 6,185.80 |
| Health | National Health Mission (NHM) | Provides free treatment, diagnostics, and essential medicines (user charges waived) in public health facilities. | 24,851.21 | 24,176.11 |
| Food & Nutrition | PM POSHAN Scheme | Provides free hot cooked meals (mid-day meals) to children in government and aided schools. | 8,457.73 | 12,680.97 |
| Food & Nutrition | Saksham Anganwadi and POSHAN 2.0 | Supplementary nutrition for children, pregnant and lactating women, adolescent girls; ECCE; Anganwadi upgrades. | 21,809.64 | 19,876.11 |
| Employment | MGNREGS | Legal guarantee of 100 days of wage employment per year for adult members of rural households. | 89,153.71 | 90,805.93 |
| Education | Samagra Shiksha Abhiyan | Supports universal access to free and compulsory school education. | 32,829.70 | 32,514.68 |
| Direct Transfers | PM-KISAN | Provides direct income support of Rs. 6,000 per year to eligible farmer families. | 61,440.74 | 58,253.82 |
| Food Subsidy | PMGKAY | Provides free food grains to NFSA beneficiaries. | 0 | 0 |
| Energy | DBT – LPG | Direct cash transfer linked to LPG consumption. | 1,460.00 | 180.00 |
| Energy | LPG Connection to Poor Households | Provides LPG connections to poor households. | 8,500.00 | 5,663.37 |
| | | **Total** | **255,173.20** | **250,336.79** |

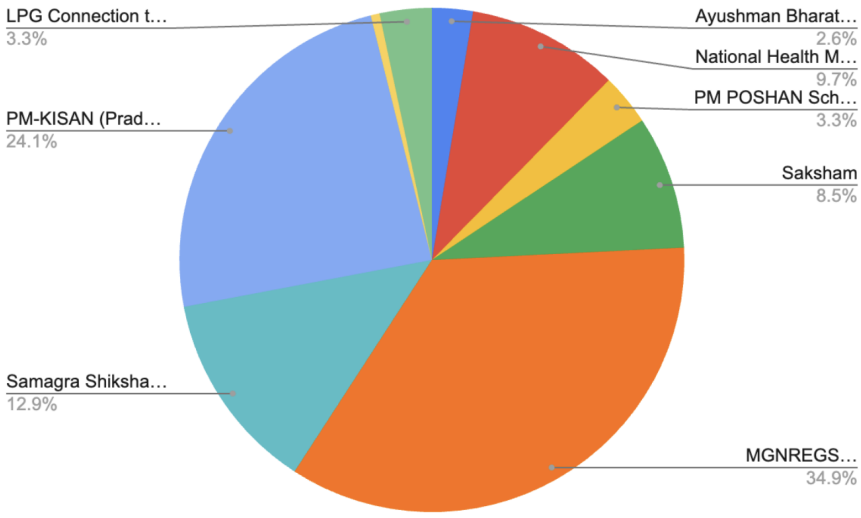


Figure 1: Expendtiure on Schemes

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